

Claim Rejections - 35 USC 112

The claims also have been amended to overcome each of the Examiner's "112" rejections.

With respect to the claim rejections 35 USC 112, a part of the Examiner's objections are overcome by new depending claims using the optional features:

hard tissue is caries dental tissue

rod-like probe section is cylindrical

With respect to the language of claim 4, the missing antecedent basis of the phrase "the output signals", is provided. The description in the final five lines of claim 5 is made clear by correcting the term "output signal" to "output signals", and the term "position" to "positions".

In claim 4, the meaning of the final phrase is: a sensor (52) for force or deformation is assigned to the spring (50).

Claim Rejection - 35 USC 102

Claims 1-5 are rejected as being anticipated by Omata.

Valid rejection under 35 USC 102 requires that each feature of a rejected claim be disclosed in a single reference. "For anticipation under 35 USC 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present." MPEP 706.02(a)

Omata does not disclose every feature of Applicant's present claims.

Omata teaches a hardness measuring apparatus by which pathological deviations of objects including biological tissue can be detected using frequency and/or phase shift and damping of an oscillator.

A hand piece 1 with a cylindrical housing 2 includes an oscillator 3, which is mechanically coupled to a contact element 5 via an oscillation conducting member 4. The

contact element 5 has cylindrical form and extends partially out of the front end of housing 2. It has the function of the measuring head and cooperates with a sensor element 7 inside the housing 2, which sensory element 7 detects the damping, frequency and/or phase shift of oscillator 3.

Omata doesn't teach an apparatus for determining the remineralization ability of hard tissue and doesn't use the physical property of porosity of the hard tissue to detect what he wants (the hardness).

Omata's apparatus is designed to be applied to the surface in cases where the hardness of hard tissue is to be measured. There is no working channel, in which a probe section can be introduced for measurement.

For measurement inside a soft tissue like a liver, Omata uses a puncture technique to get the contact element 5 into the soft tissue (see Figure 22 for instance). This however, is not the same as the preparation of a working channel into hard tissue as in the present application.

New Independent Claim

Applicant has introduced a new independent claim reading as follows:

Claim 89. Apparatus for determining the remineralization ability of a hard tissue with a measuring device (46, 60, 86, 88; 104, 114, 116, 86, 88; 130-140, 88; 144-148, 88; 150-154, 88; 156, 86, 88; 158-174) for local measurement of a physical property of the hard tissue,

wherein

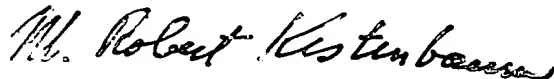
the measuring device has a measuring head (40) with a rod-like probe section (42), which probe section (42) is introducible into a working channel (32) of the hard tissue and comprises a measuring element (46, 60; 104, 116; 130, 134, 138; 144, 148; 150-154) being connected to the probe section (42) and responding to the physical property of porosity of the hard tissue, wherein the measuring head (40) has a sealing element (54) which cooperates with a section of the tissue surface, and the measuring head (40) is connected to a fluid source (76; 80) which is under a

pressure different from normal pressure, and the measuring device measures the fluid leakage through the tissue to be investigated.

The new independent claim concentrates on the physical property of porosity and includes the additional features of original claims 2 (without the optional one) and 14, and further includes a feature of the specification, namely that the probe section can be introduced into a working channel in the hard tissue (see for instance page 2, 3rd and 6th paragraph, Figures 2, 3, 13 and 14).

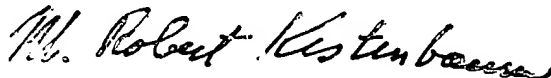
A two-month extension of time in which to respond to the outstanding Office Action is hereby requested. PTO-2038 authorizing credit card payment for the amount of \$214 is enclosed for the prescribed Small Entity two-month extension fee of \$205 and for one new additional claim fee of \$9. Any other fee due by virtue of this filing or this application should be charged to Deposit Account 11-0665. Any refunds in connection with this filing should be credited to Deposit Account 11-0665. A duplicate of this page is enclosed for this purpose.

Respectfully submitted,



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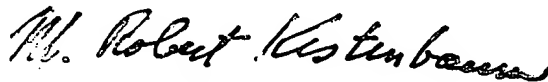
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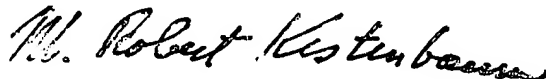
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